

ABSTRACT

A low-waste or no-waste reverse osmosis water supply system includes a pressurized permeate storage tank connected to the permeate outlet of one or more membrane elements with a valve operable by a user for tapping water on demand from the permeate storage tank. A pressurized waste storage tank is connected to the waste outlet of the element. The waste water from the waste storage, instead of being wasted is supplied on demand to a toilet tank for supplying flush water to a toilet. The operation of the system to supply product and waste is controlled by a pressure detection switch responsive to the filling of the waste tank so that if the system operates with the product tank full all water is fed to waste. The system is controlled by operating a pump which draws waste water away from the waste side at a sufficient rate, substantially independent of the pressure in the waste tank, to prevent accumulation of contaminants on the waste side. A bypass is provided to supply water from the inlet to the toilet tank if temporarily insufficient is available from the system.